

SCIENCE

A WEEKLY JOURNAL DEVOTED TO THE ADVANCEMENT OF SCIENCE, PUBLISH-
ING THE OFFICIAL NOTICES AND PROCEEDINGS OF THE AMERICAN
ASSOCIATION FOR THE ADVANCEMENT OF SCIENCE.

NEW SERIES. VOLUME XXVIII.

JULY-DECEMBER, 1908

NEW YORK
THE SCIENCE PRESS
1908

THE NEW ERA PRINTING COMPANY,
41 NORTH QUEEN STREET,
LANCASTER, PA.

CONTENTS AND INDEX.

NEW SERIES. VOL. XXVIII.—JULY TO DECEMBER, 1908.

The Names of Contributors are printed in Small Capitals.

- ABBE, JR., C., Air-ships, 210
 Abbott, D. P., Mediums, J. J., 90
 AGNEW, P. G., Energy and Magnetic Fields, 734
 Agriculture, Dep't of, 202
 Air-ships, C. ABBE, JR., 210
 Alfalfa, C. J. BRAND, 891
 ALLARD, H. A., Bufo Fowleri in N. Ga., 655
 American, Assoc. for the Advancement of Science,
 Hanover Meeting, 43, 381; Section D, 65, 69,
 109, 129, 134, 161, 289; Section A, 69, 109,
 129, 134, 161, 289; Section B, 254; Section E,
 381; Darwin Anniversary, 602; Baltimore
 Meeting, 748, 786, 910; Sectional Meetings,
 833; Annual Dues, 834; Symposium on Cor-
 relation, 878; Soc. of Naturalists, H. McE.
 KNOWER, 18, 879
 Americanists, Int. Cong. of, F. BOAS, 597
 Analyst, Chemist and Chemical Engineer, W. D.
 RICHARDSON, 396
 ANDREWS, E. A., William Keith Brooks, 777
 ANDREWS, L., Chemical Industries, 450
 Anthropological Publications of the Amer. Mu-
 seum, R. H. LOWIE, 522
 Anthropology, Physical, A. HRDLÍČKA, 33
 Appointments in Amer. Universities, S. J.
 MELTZER, 175; R. M. WENLEY, 234; G. A.
 MILLER, 561
 Arnold, Delos, Collection, 717
 ARNOLD, R., Geol. Soc. of Washington, 96, 127
 Astronomical, Exped. to Argentina, 230; and
 Astrophys. Soc. of Amer., H. JACOBY, F. H.
 SEARS, 846
 ATKINSON, G. F., Rhodochytrium spilanthis in
 America, 691
 Atmometer, B. E. LIVINGSTON, 319
 Atmosphere, Circulation of, J. M. SCHAEBERLE,
 415
 Auroral Displays, W. E. ELLIS, 727; A. SANG, 728
 B., C. R., Gray's Labyrinth of Animals, 309
 Bacteria, C.-E. A. WINSLOW, 28; Lactic Acid,
 E. G. HASTINGS, 656
 BAEKELAND, L. H., N. Y. Sect. of Am. Chem. Soc.,
 Chairman's Address, 817
 Bailey, L. H., and W. M. Coleman, Biology, S. J.
 H., 730
 BAKER, F. C., Chicago Acad. of Sci., 138; Shells
 from Texas, 534; Provincial Museums, 684
 Balloon Ascent, G. T. OVERSTREET, 343
 Ballou, C. H. A., Malaria, 885
 BANKS, N., Notes on Entomology, 24, 611
 BARNES, H. T., A Continuous Calorimeter, 176
 Barr, J. R., Direct-current Electrical Engineering,
 G. C. SHAAD, 411
 BARRELL, J., Schaeberle and Geological Climates,
 371
 BARRETT, S. B., Clerke's History of Astronomy,
 454
 Barton, E. H., Sound, D. W. HERING, 889
 BARTON, S. M., Teaching Mathematics to Engi-
 neering Students, 296
 BARUS, C., Regions of Maximum Ionization due to
 Gamma Radiation, 26
 BASKERVILLE, C., Principles in Laboratory Con-
 struction, 665
 Beauperthuy's Mosquito-born Diseases, 114
 BENDRAT, T. A., Lewis County, N. Y., 380
 Benitoite, W. C. BLASDALE, 233; Crystal Form of,
 A. F. ROGERS, 616
 BERKEY, C. P., Geology and Mineralogy, N. Y.
 Acad. of Sci., 351, 936; and Geologists of
 Northeastern U. S., 573
 Berliner, Sarah, Fellowship, 832
 BESSEY, C. E., Botanical Notes, 213, 524, 770;
 Penhallow's N. A. Gymnosperms, 609; Gray's
 Botany, 688
 BIGELOW, R. P., Tariff on Books, 841
 Biological, Station, San Diego, W. E. RITTER, 329;
 Board, D. P. PENHALLOW, F. R. LILLIE, 439;
 Roscoff Station, J. P. McMURRICH, 479; Soc.
 of Washington, M. C. MARSH, 894
 Biology and Medicine, Exper., Soc., W. J. GIES, 94
 Biotypes of Corn, W. J. SPILLMAN, 88
 Bison Society, Amer., 676
 BLAKE, W. P., Santa Catalina Gneiss, 379
 BLASDALE, W. C., Benitoite, 233
 BLUMER, G., Whipple's Typhoid Fever, 733
 BOAS, F., Jesup N. Pacific Expedition, 176; Int.
 Cong. of Americanists, 597
 Bogoslof Islands, J. C. BRANNER, 480
 Botanical, Notes, C. E. BESSEY, 213, 524, 770;
 Soc. of Washington, W. E. SAFFORD, 815; H.
 METCALF, 816
 BRAND, C. S., Alfalfa, 891
 BRANNER, J. C., Bogoslof Islands, 480
 BRANSON, E. B., Dinichthys Intermedius, 94
 BRIGGS, C. J., Moisture Content of Grain, 810
 British Assoc., President's Address, F. DARWIN,
 353, 385; to Math. and Phys. Sect., W. N.
 SHAW, 457; Geology, W. H. HOBBS, 495;
 Dublin Meeting, L. F. GUTTMAN, 585, 628;
 Mus. of Nat. History, 268
 BRITTON, N. L., American Grasses, 239
 Brooklyn Institute, 718
 BROOKS, C., Nerve Roots and Spinal Cord, 571
 Brooks, William Keith, E. A. ANDREWS, 777
 BROWN, A. E., Ruthven's Garter Snakes, 313
 BROWNING, P. E., The Rarer Elements, 548
 BRYANT, O., Ligans attracting Insects, 797
 Bryn Mawr College, S. W. HORN, 209; H. S.
 PRITCHETT, 343
 Budgett, John Samuel, W., 452
 Bufo Fowleri, H. A. ALLARD, 655
 BUMSTEAD, H. A., Campbell's Electrical Theory,
 649
 Butler, G. M., Minerals, A. J. MOSES, 276

- Calorimeter, Continuous, L. PYLE, 121; H. T. BARNES, 176
 CALVERT, P. P., Odonata, 692, 885
 CAMPBELL, D. F., Mathematics and Engineering Students, 298
 Campbell, N. R., Electrical Theory, H. A. BUMSTEAD, 649
 CAMPBELL, W., Astron., Physics and Chem., N. Y. Acad. of Sci., 31
 CAMPBELL, W. W., Two Defectives, 274
 Carica papaya, Sex in, M. J. IORNS, 125
 CASTLE, W. E., Color Variety of Guinea-pig, 250
 Catalogue, Internat., of Sci. Literature, L. C. GUNNELL, 10
 Catalytic Reduction of Fats, J. B. TINGLE, 572
 Caverns in the Ozarks, 171
 CHADWICK, G. H., Revision of N. Y. Series, 346
 CHAMBERLAIN, C. J., Goebel's Experimentelle Morphologie der Pflanzen, 650
 CHAMBERLIN, T. C. and R. T., Early Terrestrial Conditions and Organic Synthesis, 897
 CHANUTE, O., Hildebrandt's Air-ships, 20
 Chemical, Soc., Amer., 81; Gen. Meeting, B. F. CURRY, 184, 216; C. L. PARSONS, 720; N. Y. Sect., C. M. JOYCE, 128, 736; L. H. BAEKELAND, 817; N. E. Sect., F. E. THORP, 896; of Wash., J. A. LEClerc, 32, 930; Engineers, Amer. Inst. of, D. W. HORN, 96, 788; Publications and Chemical Industry, W. A. NOYES, 225
 Chemist, Industrial, J. E. TEEPLE, 321
 Chemists, Official Agricultural, Assoc. of, F. W. WOLL, 559; Industrial, C. S. PALMER, 725; J. B. TINGLE, 840
 Chicago Acad. of Sci., F. C. BAKER, 138
 CHURCH, JR., J. E., Electric Disturbances, 651
 Clerical Healing, 886
 CLARK, H. L., Garter Snakes of N. A., 682
 Clerke, A. M., Astronomy, S. B. BARRETT, 454
 Cloud Banner, B. M. VARNEY, 839
 Clouds over Fire, W. F. WALLIS, 565
 COCKERELL, T. D. A., Knuth's Flower Pollination, 345; Miocene Mammals, 683
 Coco Bud-rot, 57
 COKER, R. E., Guano Industry of Peru, 58
 COLE, A. D., Physics at the Amer. Assoc., 254
 COLE, F. N., Amer. Math. Soc., 536, 735
 Colleges, Assoc. of, in New Eng., 719
 Colts, Sores on, L. S. FRIERSON, 274
 Comet, Morehouse's, E. B. FROST, 379; E. C. PICKERING, 690
 CONKLIN, E. G., Dahlgren and Kepner's Animal Histology, 520
 CONN, H. W., Tyler's Man and Evolution, 844
 Convocation Week Meetings of Scientific Societies, 748, 786, 855, 892, 931
 COOK, O. F., Mutations, 86; Mendelian Characters, 519
 Cornell Univ., President's Report, 713
 Cotton, Wild Jamaica, F. FLETCHER, 307
 Cultures, Pure, K. F. KELLERMAN, 50
 CURRY, B. E., Gen. Meeting of Amer. Chem. Soc., 184, 216
 CURTIS, C. C., Lloyd's Physiology of Stomata, 409
 Curtis, C. C., Development of Plants, J. E. KIRKWOOD, 889
 Cycad, J. A. UDDEN, 159
 Cyclopia, C. R. STOCKARD, 455
 Dahlgren, U., and W. A. Kepner, Animal Histology, E. G. CONKLIN, 520
 D'Alembert's Principle, F. SLATE, 154
 DALL, W. H., National Antarctic Expedition, 923
 DALY, R. A., Haug's Geology, 886
 Dandelion, Yellow Disease of, W. J. MORSE, 348
 DARWIN, F., Address of President of Brit. Assoc., 353, 385
 Darwin Anniversary at the Amer. Assoc., 602
 DAVENPORT, C. B., Amer. Soc. of Naturalists, 341; Degeneration, Albinism and Inbreeding, 454; Recessive Characters, 729; Plate's Selections-prinzip und Probleme der Artbildung, 801
 DAY, A. L., Geology and Radioactive Substances, 526
 Defectives, Two, W. W. CAMPBELL, 274
 Degeneration, Albinism and Inbreeding, C. B. DAVENPORT, 454
 Democracy and Scholarship, D. KINLEY, 497
 Diabase in Mass., B. K. EMERSON, 318
 DILLINGHAM, F. T., Manurial Requirements of Soils, 491
 Dinichthys Intermedius, E. B. BRANSON, 94
 Diplodocus, Skull of, O. P. HAY, 517; W. J. HOLLAND, 644
 Discharge, Spark, Effect of Angle in Conductor on, F. E. NIPHER, 93, 807
 Discussion and Correspondence, 18, 49, 86, 121, 147, 175, 209, 233, 274, 307, 341, 371, 407, 446, 483, 516, 559, 607, 644, 682, 725, 754, 795, 837, 884, 923
 Distribution of Students, R. TOMBO, JR., 577
 Doctorates conferred by Amer. Universities, 362
 DODGE, R., Huey on Psychology and Pedagogy of Reading, 178
 DOOLITTLE, C. L., Poor on The Solar System, 56
 Drainage, Preglacial, A. W. GRABAU, 527
 Duncan, D., Herbert Spencer, R. M. WENLEY, 760
 Eastman, C. R., Devonian Fishes, L. HUSSAKOF, 311
 Economics, Home, 170
 EDDY, H. T., Mathematics and Engineering Students, 295
 Education and the Trades, S. V. KELLERMAN, 683
 Eel, The Common, T. GILL, 845
 Egg, Embryo-forming Regions, T. H. MORGAN, 287
 Electric, Disturbances, J. E. CHURCH, JR., 651; Storm, O. WISTER, 837
 Electrical Units, Conference on, 743
 Electromagnetic Mass, F. SLATE, 180
 Elements, Rarer, P. E. BROWNING, 548
 Eliot, Pres., Resignation, 681, 724, 924; Fund, 790
 Elisha Mitchell Sci. Soc., A. S. WHEELER, 776
 ELLIS, W. E., Illumination of Sky, 51; Auroral Displays, 727
 EMERSON, B. K., Diabase in Mass., 318
 Energy and Electric Field, P. G. AGNEW, 734
 Engineer, Function of, C. S. HOWE, 537
 Entomology, Notes on, N. BANKS, 24, 611
 F., O. L., Ward on Climate, 841
 FARIS, R. L., Philos. Soc. of Washington, 64, 775, 896
 Fault in an Esker, F. H. LAHEE, 654
 FAY, H., Goerens's Metallography, 489
 Fertilizer and Manure Action, A. D. HALL, 617
 Fisheries Committee, British, 300
 Fishery Congress, International, 79, 270, 599

- Fishes, W. Indian, at Beaufort, N. C., B. Mc-
GLONE, 572; Spiny-rayed, E. C. STARKS, 613
FLETCHER, F., Wild Jamaica Cotton, 307
Fletcher, James, L. O. HOWARD, 916
Forest Service, 172
FRANKFORTER, G. B., Noyes's Organic Chemistry,
238
FRANKLIN, W. S., Mathematics for Engineers,
446; The New Physics, L. POINCARÉ, 627
FRENCH, G. T., Medicago lupulina, 127
FRIERSON, L. S., Sores on Colts, 274
FROST, E. B., Morehouse's Comet, 379
- G., S. H., Wright's Microscopy, 799
GAGE, S. H. and S. P., Sudan III. deposited in the
Egg, 494
GAGER, C. S., Torrey Botan. Club, 160
Gavilan, Meaning of, C. H. MERRIAM, 147
Geographical Cong., International, 299
Geological, Soc. of Washington, R. ARNOLD, 96,
127; P. S. SMITH, 933; Climates, Schaeberle
on, J. BARRELL, 371; Survey, Oklahoma, C.
N. GOULD, 438; Soc. of Amer., E. O. HOVEY,
749
Geology, and Geog. at the Amer. Assoc., B. WILLIS,
381; at the British Assoc., W. H. HOBBS, 495;
and Radioactive Substances, A. L. DAY, 526
Getman, F. H., Physical Chemistry, W. LEC. STE-
VENS, 21
Gibbs, Wolcott, 875
GIES, W. J., Soc. for Exper. Biol. and Med., 94
GILBERT, G. K., Spencer on Niagara Falls, 148
GILL, A. H., Holley and Ladd on Mixed Paints,
277; Sabin's House Painting and Maire's
Modern Pigments, 843
GILL, T., The Common Eel, 845
GIRAULT, A. A., Jackson's Pollution of N. Y. Har-
bor, 567
Gneiss, Santa Catalina, W. P. BLAKE, 379
Goebel, K., Experimentelle Morphologie der Pflan-
zen, C. J. CHAMBERLAIN, 650
Goerens, P., Metallography, H. FAY, 489
Goldschmidt, Prof., Presentation, 402
GORDON, C. E., The Otter, 772
GOULD, C. N., Oklahoma Geol. Survey, 438
GRABAU, A. W., Preglacial Drainage, 527
Grading of Students, M. MEYER, 243
Graphic Art in Science, A. W. LEE, 471
Grasses, American, N. L. BRITTON, 239
Gray, A. A., Labyrinth of Animals, C. R. B., 309
Gray's Botany, C. E. BESSEY, 688
GREGORY, W. K., Hue's Musée Ostéologique, 234
GROAT, B. F., Mathematics and Engineering Stu-
dents, 290
Guano Industry of Peru, R. E. COKER, 58
Guinea-pig, Color Variety, W. E. CASTLE, 250
GUNNELL, L. C., Internat. Catalogue of Sci. Lit-
erature, 10
GUTHE, K. E., Teaching Mathematics to Engi-
neers, 607
GUTTMAN, L. F., Dublin Meeting of the British
Assoc., 585, 628
- H., J. F., Putnam's Nautical Charts, 766
H., S. J., Bailey and Coleman's Biology, 730
Haber, F., Gas Reactions, G. N. LEWIS, 344
Hale, G. E., Stellar Evolution, C. L. POOR, 804
HALL, ... D., Manure and Fertilizer Action, 617
Hammersten, O., Physiological Chemistry, L. B.
MENDEL, 310
HARDY, G. H., Mendelian Proportions, 49
HART, E. B., Milk Proteins, 685
HARTLEY, C. P., Apple Leaf-spot Fungi, 157
Harvard, Business School, 273; Medical School
Public Lectures, 831
HASTINGS, E. G., Lactic Acid Bacteria, 656
HATHAWAY, A. S., Mathematics and Engineering
Students, 298
Haug's Geology, R. A. DALY, 886
HAY, O. P., Dr. W. J. Holland on Skull of
Diplodocus, 517
Hay, O. P., Fossil Turtles of N. A., S. W. WIL-
LISTON, 803
Hayden Memorial Medal, 750
HAYNES, A. E., Mathematics and Engineering
Students, 297
HAZEN, T. E., Torrey Botanical Club, 934
Health, Public, W. T. SEDGWICK, 193; Nat. Com-
mittee of Amer. Assoc. on, 676
Helium, Liquefaction of, 180, 316
Heredity, Mendelian, R. H. JOHNSON, 771
HERING, D. W., Sound, E. H. BARTON, 888
Hildebrandt, A., Air-ships, O. CHANUTE, 20
HILGARD, E. W., Soils and Fertilizers, H. Snyder,
926
HITCHCOCK, C. H., News from Kilauea, 19
HOBBS, W. H., Geology at the British Assoc., 495
HOLLAND, W. J., Skull of Diplodocus, 644; New
Species of Moropus, 809
Holley, C. D., and E. F. LADD, Mixed Paints, A. H.
Gill, 277
HOPKINS, C. G., Chemical Principles of Soil
Classification, 857
HORN, D. W., Amer. Inst. of Chem. Engineers, 96;
Salaries at Bryn Mawr College, 209
HOVEY, E. O., Geol. Soc. of Amer., 749
HOWARD, L. O., Dues of Am. Assoc., 834; James
Fletcher, 916
HOWE, C. S., Mathematics and Engineering, 291;
Function of the Engineer, 537
HOWE, M. A., Torrey Botan. Club, 930
HRDLICKA, A., Physical Anthropology, 33; Otis
Tufton Mason, 746
Hue, E., Musée Ostéologique, W. K. GREGORY, 234
Huey, E. B., Psychology of Reading, R. DODGE, 178
Hummingbird and Hornet, C. W. MEAD, 408
HUNT, R., Loco-weed Disease, 570; Amer. Physiol.
Soc., 750
HUNTINGTON, E. V., Mathematics and Engineer-
ing, 298
HUSSAKOF, L., Eastman on Devonie Fishes, 311
Hygiene, Lectures, Cornell, 337
- Illinois Univ., Col. of Engineering, 306; Adminis-
tration, G. T. KEMP, 483, 643
Indian Inst. of Science, 12
Inheritance, Alternative, F. E. LUTZ, 317
Insect Box, Economical, A. M. REESE, 797
Inspection of Commodities, A. L. WINTON, 636
Ionization, and Gamma Radiation, C. BARUS, 26
IORNS, M. J., Sex in Carica papaya, 125
- J. J., Abbott on Mediums, 90
Jackson, D. D., Pollution of N. Y. Harbor, A. A.
GIRAULT, 567
JACOBY, H., and F. H. SEARS, Astron. and Astro-
phys. Soc. of Amer., 846

- Jesup North Pacific Exped., F. BOAS, 176
 Johns Hopkins Univ. Sci. Assoc., C. K. SWARTZ, 814
 JOHNSON, R. H., Mendelian Heredity, 771
 JOLY, J., Uranium and Geology, 697, 737
 JOYCE, C. M., N. Y. Sect. of Amer. Chem. Soc., 128, 736
 JUDD, C. H., Univ. of Leipzig, 884
- KELLERMAN, K. F., Legume Inoculation, 50
 KELLERMAN, S. V., Education and the Grades, 683
 KEMP, G. T., Administration at Univ. of Illinois, 483
 KENT, W., Ideal Univ. Administration, 8
 KEYES, F. G., Vacuum Stopcock, 735
 Kilauea, News from, C. H. HITCHCOCK, 19
 KINLEY, D., Democracy and Scholarship, 497
 KIRKWOOD, J. E., Development of Plants, C. C. Curtis, 889
 KNOWER, H. McE., Amer. Soc. of Naturalists, 18, 879
 Knuth, P., Flower Pollination, T. D. A. COCKERELL, 345
 KOBER, GEO. M., Hygiene, L. C. Parkes, 9
 KRAUS, E. H., Groth's Chemische Krystallographie, 843
- Laboratory Teaching for Culture Students, C. H. SHAW, 349; Construction, C. BASKERVILLE, 665
 LAHEE, F. H., Fault in an Esker, 654
 Leaf-spot Fungi, C. P. HARTLEY, 157
 LECLERC, J. A., Chem. Soc. of Wash., 32, 930
 LEE, A. W., Graphic Art in Science, 471
 LEE, F. S., Harvey Lectures, 566
 Lehigh University and University of Liverpool, 141
 Leipzig Univ., 500th Anniversary, 884
 LeRenard, A., la Valeur Antitoxique de l'Aliment Complet, H. S. REED, 236
 Lesions of Dorsal Nerve Roots, C. BROOKS, 571
 LEWIS, G. N., Young's Phys. Chemistry, 89; Haber on Gas Reactions, 344
 Lights attracting Insects, O. BRYANT, 797
 Lithium in Radioactive Minerals, 412
 LITTLEHALES, G. W., Rust's Ex-meridian Tables, 842
 LIVINGSTON, B. E., Atmometer, 319
 LLOYD, F. E., Indiarubber, H. L. Terry, 890
 Lloyd, F. E., Physiology of Stomata, C. C. CURTIS, 409
 Lloyd Library, 141
 Loco-weed Disease, R. HUNT, 570
 LOEB, J., and S. S. MAXWELL, T. B. ROBERTSON, T. C. BURNETT, Encouragement of Charles D. Snyder, 645
 LOWIE, R. H., Anthropological Publications of the Amer. Museum, 522
 LUTZ, F. E., Alternative and Blending Inheritance, 317
- McM., J. P., Thomson's Heredity, 210
 McGLONE, B., W. Indian Fishes at Beaufort, N. C., 572
 McMURRICH, J. P., Mar. Biol. Sta. of Roscoff, 479
 McNAIR, F. W., Mathematics and Engineering, 266
 MACNUTT, S., and W. T. SEDGWICK, Typhoid Fever, 215
- MAGRUDER, W. T., Mech. Sci. and Engineering at Amer. Assoc., 65
 Maire, F., Pigments, A. H. GILL, 843
 MAJOR, D. R., Shinn's Development of Child, 763
 Malaria, H. A. BALLON, 885
 MARSH, M. C., Biol. Soc. Washington, 894
 Mason, Otis Tufton, A. HRDLICKA, 746
 Mathematical Soc., Amer., F. N. COLE, 536, 735
 Mathematics, Teaching of, C. OTTERMANN, 1; for Engineers, E. J. TOWNSEND, 69; C. F. SCOTT, 129; R. S. WOODWARD, 134; R. MODJESKI, 161; J. A. L. WADDELL, 163; G. S. WILLIAMS, 165; A. N. TALBOT, 167; G. F. SWAIN, 257; C. S. SLICHTER, 261; F. S. WOODS, 263; F. W. McNAIR, 266; C. M. WOODWARD, 289; B. F. GROAT, 290; C. S. HOWE, 291; C. A. WALDO, 292; C. B. WILLIAMS, 294; J. B. WEBB, 294; H. T. EDDY, 295; S. M. BARTON, 296; A. E. HAYNES, 297; A. S. HATHAWAY, 298; E. V. HUNTINGTON, 298; D. F. CAMPBELL, 298; C. S. PALMER, 407; W. S. FRANKLIN, 446; K. E. GUTHE, 607; in Foreign Countries, A. ZIWET, 109
 MATTHEW, W. D., Amer. Soc. Vertebrate Paleontologists, 749
 MAXIM, H., Warfare of the Future, 820
 MEAD, C. W., Hummingbird and Hornet, 408
 Mechanical Sci. and Eng. at the Amer. Assoc., W. T. MAGRUDER, 65
 Medicago lupulina, G. T. FRENCH, 127
 Medical Museums, Internat. Assoc. of, 832
 MELTZER, S. J., Appointments in American Universities, 175
 MENDEL, L. B., Hammarsten's Physiol. Chemistry, 310
 Mendelian, Proportions, G. H. HARDY, 49; Mutations, O. F. COOK, 86; Characters, O. F. COOK, 519
 MERRIAM, C. H., Spanish Word Gavilan, 147
 MERRITT, E., Amer. Physical Soc., 696
 METCALF, H., Bot. Soc. of Washington, 816
 Meteoric Fall, E. THOMSON, 516
 MEYER, M., Grading of Students, 243
 MILLER, G. A., Appointments, 561; Royal Soc. Catalogue of Sci. Papers, 610
 Minerals from Ontario, 336
 Mining Cong., Amer., 787
 MINOT, C. S., Vialleton's l'Evolution, 122
 Miocene Mammals, T. D. A. COCKERELL, 683
 MODJESKI, R., Mathematics and Engineering, 161
 Moisture Content of Grain, L. J. BRIGGS, 810
 MORGAN, T. H., Embryo-forming Regions in the Egg, 287
 Moropus, New Species, W. J. HOLLAND, 809
 MORSE, W. J., Yellow Disease of Fall Dandelion, 348
 MOSES, A. J., Butler on Minerals, 276
 MURRILL, W. A., Torrey Botanical Club, 935
 Museums, Provincial, F. C. BAKER, 684
- Naples, Zool. Sta. Univ. Table, 640
 National, Education Assoc., 333; Acad. of Sci., 814
 Naturalists, Amer. Soc. of, H. McE. KNOWER, 18, 879; C. B. DAVENPORT, 341
 Nature-study Soc., Amer., 750
 N. Y., Acad. of Sci., Astron., Physics, and Chem., W. CAMPBELL, 31; Geol. and Mineral., C. P. BERKEY, 351, 930; and Geologists of North-

- eastern U. S., C. P. BERKEY, 573; Darwin Celebration, 790
New York 'Series', G. H. CHADWICK, 346
Niagara Falls, J. W. SPENCER, 754
NIPHER, F. E., Effect of Angle in Conductor on Spark Discharge, 93, 807
Nomenclature, Zoological, 490
NOYES, A. A., Talk on Teaching, 657
NOYES, W. A., Chemical Publications, 225
Noyes, W. A., Organic Chemistry, G. B. FRANK-FORTER, 238
Nutrition, Animal, Amer. Soc., 878

Odonata, P. P. CALVERT, 692, 885
Orbitosphenoid in Fishes, E. C. STARKS, 413
Organic Synthesis and Early Terrestrial Conditions, T. C. and R. T. CHAMBERLIN, 897
OSBORNE, T. B., Plant Proteins, 417
Otter in Massachusetts, C. E. GORDON, 772
OTTERMANN, C., Mathematics, 1
OVERSTREET, G. T., Balloon Ascent, 343

Paleontologists, Vertebrate, Amer. Soc. of, W. D. MATTHEW, 749
PALMER, C. S., Mathematics and Engineering, 407; Industrial Chemists, 725
Parasitic Control of Insect Pests, C. W. WOODWORTH, 227
Parkes, L. C., Hygiene, G. M. KOBER, 924
PARSONS, C. L., Amer. Chem. Soc., 720
Peary's Expedition, 205
PENHALLOW, D. P., and F. R. LILLIE, Biological Board, 439
Penhallow, D. P., N. A. Gymnosperms, C. E. BESSEY, 609
Peridotite Collection, P. F. SCHNEIDER, 92
Permian Amphibians, S. W. WILLISTON, 316
PERRET, F. A., Volcanic Eruptions, 277
Philosophical Soc. of Wash., R. L. FARIS, 64, 775, 896
Physical Soc., Amer., E. MERRITT, 696
Physics at Amer. Assoc., A. D. COLE, 254
Physiological Soc., Amer., R. HUNT, 750
PICKERING, E. C., Moorehouse's Comet, 690
PIKE, F. H., Spinal Shock, 808
Pirsson, L. V., Rocks and Rock Minerals, C. H. WARREN, 374
Pittsburgh Acad., Sect. of Biol., P. E. RAYMOND, 776
Plate, L., Selectionsprinzip, C. B. DAVENPORT, 801
Poincaré, L., New Physics, W. S. FRANKLIN, 627
POOR, C. L., Hale's Stellar Evolution, 804
Poor, C. L., Solar System, C. L. DOOLITTLE, 56
PRITCHETT, H. S., Salaries at Bryn Mawr, 343
Proteins, of Plants, T. B. OSBORNE, 417; Milk, E. B. HART, 685
Putnam, G. R., Nautical Charts, J. F. H., 766
PYLE, L., A Continuous Calorimeter, 121

Quotations, 53, 88, 122, 147, 308, 343, 373, 409, 445, 488, 565, 648, 685, 729, 798, 886

Radium Emanations, 805
RAMALEY, F., Temperatures in Colorado, 695
RAYMOND, P. E., Section of Biol., Pittsburgh Acad., 776
REAGAN, A. B., Blowing of Soils, 653
Recessive Characters, C. B. DAVENPORT, 729
REED, H. S., LeRenard's Valeur Antitoxique de l'Aliment Complet, 236
REESE, A. M., Economical Insect Box, 797
Rhodochytrium spilanthis, G. F. ATKINSON, 691
RICHARDSON, R. E., Simroth's Die Pendulations-theorie, 375
RICHARDSON, W. D., The Analyst, Chemist and Chemical Engineer, 396
RITTER, W. E., Work of San Diego Mar. Biol. Sta., 329
Rocks, Sedimentary, J. M. SCHAEFERLE, 562
ROGERS, A. F., Benitoite, 616
Roosevelt, President, Message, 868; African Trip, 876
Ross, E. A., Social Psychology, L. F. WARD, 54
Rust, A., Ex-meridian Tables, G. W. LITTLEHALES, 842
Ruthven, A. G., Garter Snakes, A. E. BROWN, 313

S., Professors' Salaries, 759
Sabin, A. H., House Painting, A. H. GILL, 843
SAFTORD, W. E., Bot. Soc. of Washington, 815
Salaries of Professors, 97; S., 759
SANG, A., Auroral Displays, 728
SCHAEFERLE, J. M., Eastward Circulation of Atmosphere, 415; Sedimentary Rocks, 562
SCHNEIDER, P. F., Collection of Peridotite, 92
Scientific, Notes and News, 14, 45, 82, 114, 142, 172, 206, 231, 270, 301, 337, 369, 403, 440, 480, 510, 555, 603, 640, 679, 720, 750, 791, 834, 880, 920; Books, 20, 54, 89, 122, 148, 176, 210, 234, 275, 309, 344, 374, 409, 452, 489, 520, 566, 609, 649, 686, 730, 760, 799, 841, 886, 920; Journals and Articles, 23, 56, 124, 179, 239, 315, 411, 454, 490, 569, 651, 689, 769, 929
SCOTT, C. F., Mathematics and Engineers, 129
SEARS, F. H., and H. JACOBY, Astron. and Astrophys. Soc. of Amer., 846
SEDGWICK, W. T., Public Health, 193; and S. MACNUTT, Typhoid Fever, 215
SEE, H., Tompkins's Marine Engineering, 686
SHAAD, G. C., Barr's Electrical Engineering, 411
SHAW, C. H., Culture Students, 349
SHAW, W. N., Address of President to Math. and Phys. Sect. of British Assoc., 457
Shells from Texas, F. C. BAKER, 534
Shinn, M. W., Development of a Child, D. R. MAJOR, 763
SIMONDS, F. W., Texas Acad. of Sci., 352
Simroth, H., Die Pendulationstheorie, R. E. RICHARDSON, 375
Sky, Illumination, W. E. ELLIS, 51
SLATE, F., d'Alembert's Principle, 154; Electromagnetic Mass, 180
Sleeping Sickness, 113
SLICHTER, C. S., Mathematics and Engineering, 261
Smith, A., Chemistry, H. L. WELLS, 344
SMITH, J. B., Mosquito Life, 22
SMITH, P. S., Geol. Soc. of Washington, 933
Smithsonian Institution, 917
Snakes, Garter, of N. A., H. L. CLARK, 682
SNYDER, C. D., Reply to Loeb, Maxwell, Burnett and Robertson, 795
Snyder, Charles D., Encouragement of, J. LOEB, S. S. MAXWELL, T. B. ROBERTSON, T. C. BURNETT, 645; C. D. SNYDER, 795
Snyder, H., Soils and Fertilizers, E. W. HILGARD, 926

- Societies and Academies, 31, 64, 94, 127, 160, 351, 536, 573, 696, 735, 775, 814, 894, 933
 Sociological Society, Amer., 640
 Soil, Sampler, New, W. H. STEVENSON, 614; Classification, C. G. HOPKINS, 857
 Soils, Tests, F. T. DILLINGHAM, 491; Blowing of, A. B. REAGAN, 653
 Spargo, J., The Milk Question, W. C. WOODWARD, 123
 Special Articles, 26, 58, 93, 125, 154, 180, 215, 243, 277, 316, 346, 379, 413, 454, 491, 527, 571, 613, 651, 691, 734, 771, 807, 845, 930
 SPENCER, J. W., Niagara Falls, 754
 Spencer, J. W., Niagara Falls, G. K. GILBERT, 148
 SPILLMAN, W. J., Biotypes of Corn, 88; Varieties and Domesticated Species, 252
 Spinal Shock, F. H. PIKE, 808
 Standards, Bureau of, and Chem. Industries, L. ANDREWS, 450
 STARKS, E. C., Orbitosphenoid in Fishes, 413; Air-bladder and Ear in Spiny-rayed Fishes, 613
 STEARNS, R. E. C., Dr. John B. Trask, 240
 STEVENS, W. LEC., Getman's Physical Chemistry, 21
 STEVENSON, J. J., W. Va. Geol. Survey, 768
 STEVENSON, W. H., Soil Sampler, 614
 STOCKARD, C. R., Cyclopia, 455
 Stopcock, Vacuum, F. G. KEYES, 735
 Sudan III. deposited in Eggs, S. H. and S. P. GAGE, 494
 SWAIN, G. F., Mathematics and Engineering, 257
 SWARTZ, C. K., Scientific Assoc. of Johns Hopkins Univ., 814
 Swift, E. J., Mind in the Making, E. L. THORNDIKE, 212
 TALBOT, A. N., Mathematics and Engineering, 167
 Tariff and Books, R. P. BIGELOW, 841
 Teaching, Talk on, A. A. NOYES, 657
 TEEPLE, J. E., The Industrial Chemist, 321
 Temperatures in Colorado, F. RAMALEY, 695
 Terry, H. L., India-rubber, F. E. LLOYD, 890
 Texas Acad. of Sci., F. W. SIMONDS, 352
 THOMSON, E., Meteoric Fall, 516
 Thomson, J. A., Heredity, J. P. McM., 210
 THORNDIKE, E. L., Swift on Mind in the Making, 212
 THORP, F. H., Am. Chem. Soc., N. E. Section, 896
 TINGLE, J. B., Catalytic Reduction of Fats, 572; Industrial Chemists, 840
 TOMBO, JR., R., Distribution of Students, 577; Univ. Registration Statistics, 911
 Tompkins, A. E., Marine Engineering, H. SEE, 686
 Torrey Botanical Club, C. S. GAGER, 160; T. E. HAZEN, 934; W. A. MURRILL, 935; M. A. HOWE, 930
 TOWNSEND, E. J., Mathematics and Engineering, 69
 Trask, Dr. John B., R. E. C. STEARNS, 240
 TROTTER, S., The Real Unicorn, 608
 Tuberculosis, Internat. Cong., 269, 336, 438
 Tyler, J. M., Evolution, H. W. CONN, 844
 Typhoid Fever, W. T. SEDGWICK, S. MACNUTT, 215
 UDDEN, J. A., Cycad, 159
 Unicorn, The Real, S. TROTTER, 608
 University, Administration, W. KENT, 8; and Educational News, 17, 48, 85, 120, 145, 174, 208, 233, 273, 305, 341, 371, 406, 443, 482, 515, 558, 606, 644, 681, 724, 754, 794, 837, 884, 922; Professor in Germany, Financial Status of, 427; Registration Statistics, R. TOMBO, JR., 911
 Uranium and Geology, J. JOLY, 697, 737
 Varieties, Origin of, W. J. SPILLMAN, 252
 VARNEY, B. M., Notable Cloud Banner, 839
 Vialleton, L., l'Evolution, C. S. MINOT, 122
 Vilas, William F., Memorial Exercises in Honor of, 601
 Vital Statistics, French, 877
 Volcanic Eruptions, F. A. PERRETT, 277
 von Groth, P., Chemische Krystallographie, E. H. KRAUS, 843
 W., Work of John Samuel Budgett, 452
 WADDELL, J. A. L., Mathematics to Engineering Students, 163
 WALDO, C. A., Mathematics and Engineering Students, 292
 WALLIS, W. F., Clouds over Fire, 565
 WARD, L. F., Ross's Social Psychology, 54
 Ward, R. DeC., Climate and Man, O. L. F., 841
 Warfare of the Future, H. MAXIM, 820
 WARREN, C. H., Rocks and Rock Minerals, 374
 Washburn, M. F., Animal Mind, J. B. WATSON, 275
 WATSON, J. B., Yerkes on the Dancing Mouse, 151; Washburn on the Animal Mind, 275
 WEBB, J. B., Mathematics and Engineering, 294
 WELLS, H. L., Smith's Chemistry, 344
 WENLEY, R. M., Appointments in Am. Universities, 234; Duncan's Life and Letters of Herbert Spencer, 760
 WHEELER, H. S., Elisha Mitchell Sci. Soc., 776
 Whipple, G. C., Typhoid Fever, G. BLUMER, 733
 Whitman, Professor, and the Mar. Biol. Laboratory, 509
 WILLIAMS, C. B., Mathematics and Engineering, 294
 WILLIAMS, G. S., Mathematics and Engineering, 165
 WILLIS, B., Geol. and Geog. at the Amer. Assoc., 381
 WILLISTON, S. W., Permian Amphibians, 316; Hay on Fossil Turtles of N. A., 803
 WINSLOW, C.-E. A., Bacteria in Air, 28
 WINTON, A. L., Official Inspection of Commodities, 636
 WISTER, O., Electric Storm, 837
 WOLL, F. W., Assoc. of Off. Agric. Chemists, 559
 WOODRUFF, L. L., Amer. Soc. Zool., 749
 WOODS, F. S., Mathematics and Engineering, 263
 WOODWARD, C. M., Mathematics and Engineering, 289
 WOODWARD, R. S., Engineering Mathematics, 134
 WOODWARD, W. C., Spargo on Milk Question, 123
 WOODWORTH, C. W., Parasitic Control of Insect Pests, 227
 Wright, A. E., Microscopy, S. H. G., 799
 Yale Alumni, 789
 Yerkes, R. M., The Dancing Mouse, J. B. WATSON, 151
 Young, S., Physical Chemistry, G. N. LEWIS, 89
 ZIWET, A., Mathematics and Engineering, 109
 Zoologists, Amer. Soc. of L. L. WOODRUFF, 749

